

Friday, August 05, 2016 2:17:43 PM

649.5210
E148864
REV. A

1 49864

Page 1

Reference:

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date: 16/08/05

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

[illegible]

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			Completed By
					Lead hand / Supervisor Approval Verification
					QC / QA Coordinator Approval
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER :			

Work Order ID 149864

Friday, August 05, 2016 2:17:44 PM

149864

Page 4

Item ID: 649.5210

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Doubler

Start Date: 8/5/2016 Start Qty: 5.00

5

Cust Item ID:

Required Date: 8/31/2016 Req'd Qty: 5.00

5

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	Identify as per dwg & Stock Location: <u>CK125</u>	0.00							
210									
Packaging	Memo	0.01							
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***								
220	QC21- Final Inspection - Work Order Release	0.00							
220									
QC	Memo	0.08							
Quality Control									

DAS
21
9-89 AUG 26 2016

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

Page 1

Friday, August 05, 2016 2:21:01 PM

Work Order ID: 149864

149864

Parent Item: 649.5210

649 5210

Parent Item Name: Doubler

Start Date: 8/5/2016

Required Date: 8/31/2016

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP REV:A 13.01.10 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.125		Purchased		No		110	sf	13.0000	0.06	0.315789			

M2024T3S 125

2024-T3 .125 sheet

de 16/08/05

Location

Loc Qty

Loc Code

MAT021

13

M127668

13

.5

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03696				SHEET 1 OF 1	
	DWG NO. 649.5200	REV: A	PREPARED BY B. PETERS	DATE: 11/14/12	EFFECT ON DWG ☐ INC. ☒ UNINC.	
	DWG TITLE: BRACKET					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER		
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE	REASON: ADDED ALTERNATE MATERIAL.				ECR: D-12-004	

SHEET 1, ZONE A2 IS:

① MATERIAL: 7075-T651 ALUMINUM PER AMS-QQ-A-250/12.

IS

- △ ALTERNATE MATERIAL: 0.125 INCH THICK 2024-T3 ALUMINUM SHEET METAL.
 △ ALTERNATE MATERIAL: 7075-T6511 ALUMINUM PER AMS-QQ-A-200/11.

SHEET 1, ZONE B1 IS:

SHOP COPY
RETURN TO
ENGINEERING

5	R	649.5214		BRACKET	UNCONTROLLED COPY	① ⑧	② ⑥
4	R	649.5213		DOUBLER	SUBJECT TO AMENDMENT	① ⑦	②
3	R	649.5212		BRACKET	WITHOUT NOTICE	① ⑧	② ⑤
2	R	649.5211		SHIM	WORK ORDER NO. 149864	① ⑦	②
1	R	649.5210		DOUBLER		① ⑦	②
F/N	TC	PART NUMBER	QTY	DESCRIPTION		MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:					☐ RFMS ☐ MDL ☐ INSTALL INSTRU ☐ ICA ☒ BOM	CHANGE CATEGORY ☐ MAJOR ☒ MINOR	DER REVIEW REQUIRED ☐ YES ☒ NO

w/o 149864

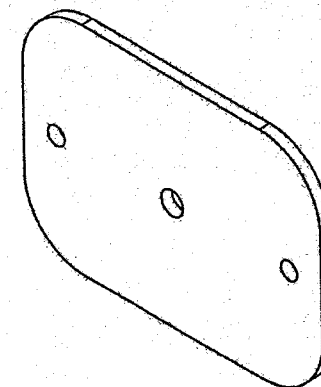
dm 16/08/05

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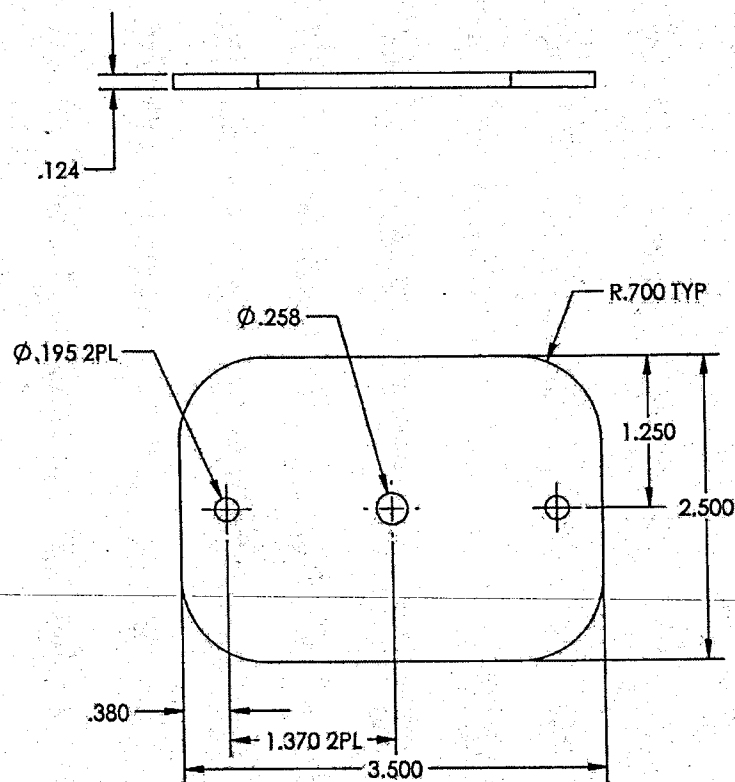
NOTES: UNLESS OTHERWISE SPECIFIED

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR: BLACK; PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J TYPE I, CLASS N.
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120. LASER ENGRAVE CENTURY GOTHIC, 12 POINT P/N AND REVISION.
- 5 PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 649.5212 BRACKET.SLDPRT, LAST MODIFIED 11-02-11.
- 6 PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: 649.5214 BRACKET.SLDPRT, LAST MODIFIED 11-02-11.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE REVISION P01		NEA
1/02	INITIAL RELEASE	11-02-11	P. BRAVO
A	INCORPORATED ECN 03488	06-07-12	P. BRAVO



649.5210



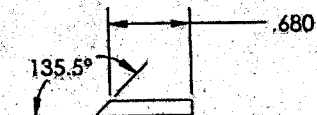
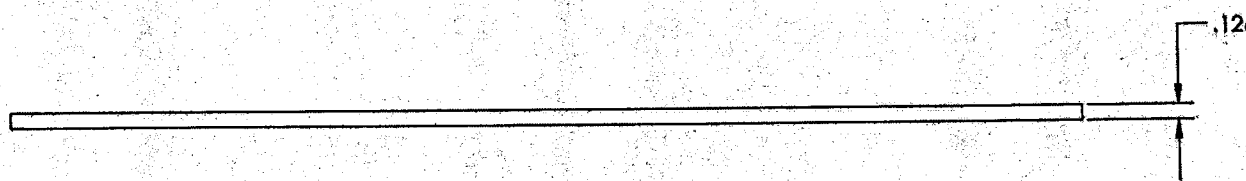
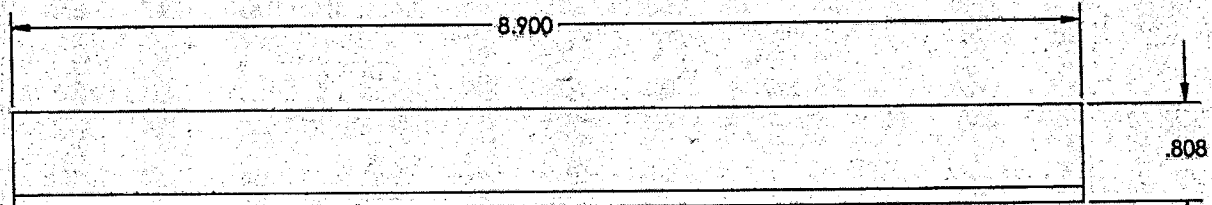
UNINCORPORATED ECN(s)

03696

	5	649.5214	BRACKET	△	△△△
	4	649.5213	DOUBLER	△	△
	3	649.5212	BRACKET	△	△△△
	2	649.5211	SHIM	△	△
	1	649.5210	DOUBLER	△	△
	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
QTY		PARTS LIST			
NEXT ASSY (S)		APICAL INDUSTRIES			
649.4700		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300			
		BRACKET			
		CAGE CODE		DWS. NO.	
		B 07M16		649.5200	
		SCALE		NONE	
				SHEET 1 OF 4	

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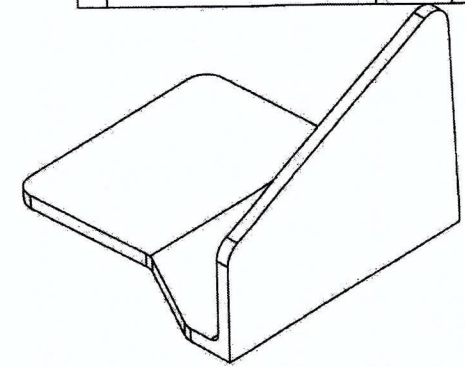
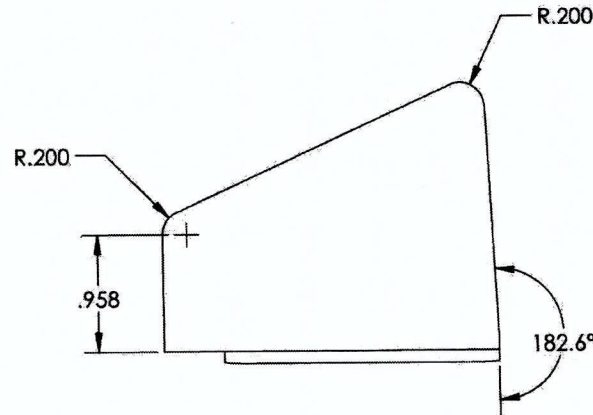
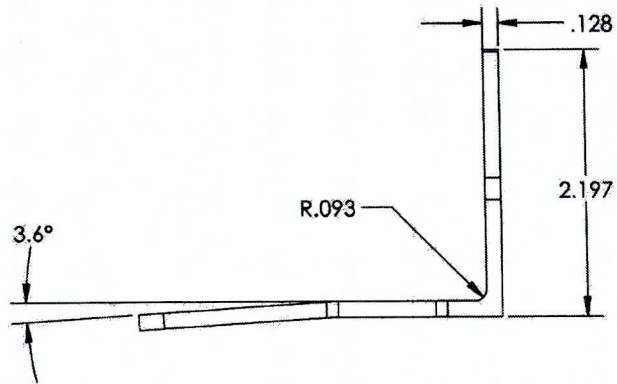
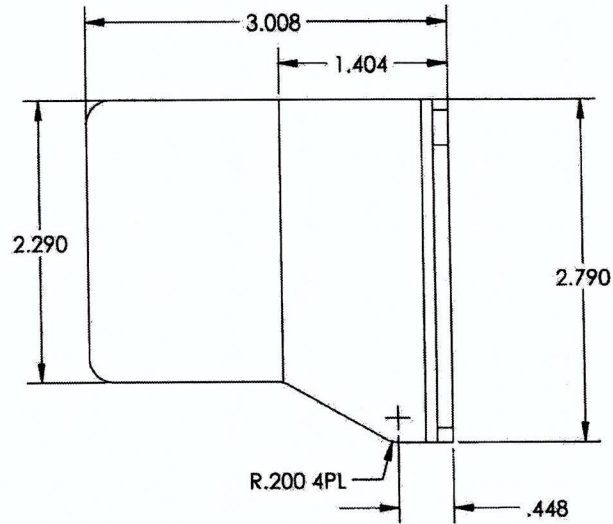
REV.	DESCRIPTION	DATE	APPROVED



ORIGINAL DATE 12/28/12 (11/25/11)		APICAL INDUSTRIES	
DRAWN BY A. QUINN		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKED BY J. BRAVO		BRACKET	
DRAWING APPROVAL 11/29/12		PART CODE B 07M26	
CONTRACT NO.		QTY. NO. 649.5200	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS ±.005 ANGLES ±.5°		SCALE NONE	
		SHEET 2 OF 4	

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REVIEWS			
REV.	DESCRIPTION	DATE	APPROVED

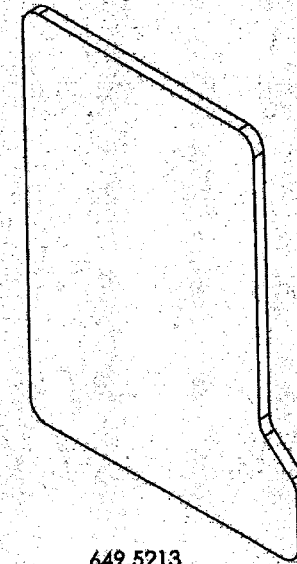
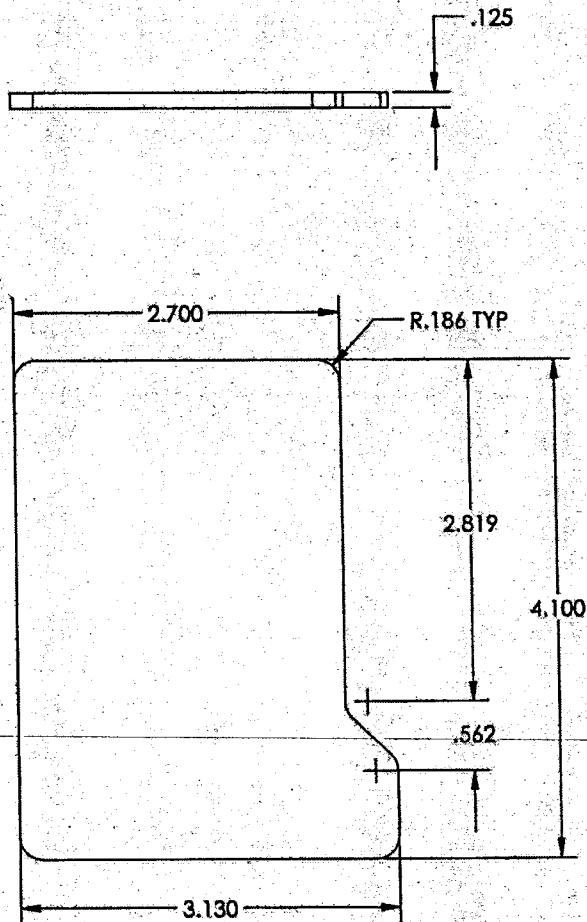


649.5212 SHOWN
649.5214 OPPOSITE

ORIGINAL DATE (DD-MMM-YY) 11-02-11		APICAL INDUSTRIES	
DRAWN BY A. QUAN		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKED BY P. BRAVO		BRACKET	
DRAWING APPROVAL (SIGNATURE)		SCALE NONE	
CONTRACT NO.		SHEET 3 OF 4	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SHEET CODE B 07M26	DWG. NO. 649.5200

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



ORIGINAL DATE 11-02-11		APICAL INDUSTRIES	
DRAWN BY A. GIAN		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKED BY P. BRAY		BRACKET	
DRAWING APPROVAL P. BRAY 11-02-11			
CONTRACT NO.		REV. NO. 649.5200	REV. A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.001 ANGLES ± 3°		SCALE NONE	SHEET 4 OF 4



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 912152

Date: 25-Aug-16

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

CHANTAL LAVOIE
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
Quantity	Description		
	PLEASE REFERENCE THE PACK LIST NUMBER ON ALL CORRESPONDENCE TO THIS SHIPMENT. IF YOU HAVE ANY QUESTIONS, PLEASE CALL AT (613) 446-4544.		
16 ea	Part: 649.4817 Shim Job: 19954	Rev: B PO: PO33355	Line: 1
10 ea	Part: D3299-1 Fitting Job: 19962	Rev: C PO: PO33355	Line: 10
1 ea	Part: ADMIN FEE Administrative Fee Job: 19963	Rev: PO: PO33355	Line: 12
15 ea	Part: 646.3715 Strut Job: 19955	Rev: A PO: PO33355	Line: 2
11 ea	Part: 646.3719 Doubler Job: 19956	Rev: A PO: PO33355	Line: 3 & 6
6 ea	Part: 649.5210 Doubler Job: 19957	Rev: A PO: PO33355	Line: 4
6 ea	Part: 646.3718 Custom Washer Job: 19958	Rev: A PO: PO33355	Line: 5
10 ea	Part: 646.3811 Radius Block Job: 19959	Rev: NC PO: PO33355	Line: 7

**Purchase Order ID PO33355****Purchase Order Date** 8/17/2016

PO Print Date 8/25/2016

Page Number 2 of 5

Order From :

VC-ATG001

Ship To : DART AEROSPACE LTD

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 613-446-4544

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms

Net 30

Currency

CAD

FOR

FCA – (Free Carrier)

Line Total:	\$37.50
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4	149864	649.5210 DOUBLER REV. A	8/25/2016	6.00		\$7.40	\$44.40
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Yes

8/25/2016

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Line Total:	\$44,40
--------------------	----------------

5	148306	646.3718 CUSTOM WASHER REV. A	8/25/2016	6.00	\$3.95	\$23.70
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Yes

8/25/2016

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Line Total:	\$23.70
--------------------	----------------

6	148282	646.3719 DOUBLER REV. A	8/25/2016	5.00	\$6.25	\$31.25
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Yes

8/25/2016

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Note:

8/26/16
SD

8/25/2016